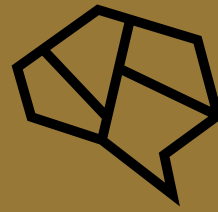




MENZIES
RESEARCH CENTRE



PAGE
RESEARCH CENTRE

Hiding the cost

A Hidden Carbon Tax

How bad policy drives up the cost of electricity

—
A report by the Menzies Research Centre
and Page Research Centre



Contents

Covering Letter	1
Introduction	2
Regional Analysis	5
Conclusions	9
Appendix	10

Six years ago Australians made a firm decision to reject a carbon tax. They did so mindful of the harm it would inflict on families, businesses and the general economy.

This year the electorate is being asked to approve a new carbon tax, a hidden levy added to the cost of transport, resources, manufacturing, construction and above all, electricity.

As this report shows, Labor's accelerated plan to reduce greenhouse gas emissions at a pace much faster than our international competitors will cause electricity prices to rise significantly over the next decade.

The hidden tax required to pay for this radical and disruptive change will be considerably larger and more damaging than the original carbon tax.

In a series of reports, the Menzies Research Centre and the Page Research Centre will investigate the many ways in which Australians will pay for Labor's misconstrued energy policy.

A reliable supply of affordable electricity is vital to our economy. From the refining of mineral and the production of milk to the grilling of burgers at the local milk bar, the viability of much of Australia's business activity depends on the supply of cheap and reliable electricity and gas.

As a key determinant of the cost of living, power bills can eat into disposable income, increase household debt and become a source of all misery.

It behoves politicians of every persuasion to think carefully about the consequences of the policies they propose, whether intended or unintended, to be open about the cost and frank with those who will pay for them.

We hope that this report will stimulate a genuine and honest debate.



Nick Cater
Executive Director
Menzies Research Centre



Kristian Jenkins
Executive Director
Page Research Centre

Introduction

Most Australians are in favour of taking steps to reduce the volume of greenhouse gas entering the atmosphere. Polling published by the Menzies and Page research centres shows that a majority of voters support reducing emissions in line with our international commitments.

The benefits of decarbonising the Australian economy are well understood within the framework of scientific assumptions about the causes of climate change. The costs of such policies however are seldom articulated.

This paper attempts to throw some light on the question of costs, by examining how government intervention to reduce carbon gas emissions will alter the retail price of electricity.

Reducing emissions is expensive, particular if the reductions occur in the generation sector. It involves substantial investment in new generators, storage and transmission. Power generation is capital intensive and an investment may take many years to recoup.

Yet these costs are often hidden from the public, despite the fact that the cost ultimately must be paid by them, either as taxpayers or consumers.

In the interests of good government, accountability and robust democracy, we firmly believe that the electorate must be informed of the costs, as well as the presumed benefits, of all public policy before they are called upon to endorse or reject it at an election.

The task at hand

The latest assessment from the Department of the Environment and Energy shows we are on track to meet the 2030 target Australia is required to achieve as a signatory to the 2015 Paris Agreement.

This is no small achievement. It requires:

- Reducing emissions per capita by around 50 per cent, one of the largest reductions of any G20 economy
- Reducing the emissions intensity of the Australian economy to around 65 per cent in the 25 years until 2030
- Repositioning Australia from the world's 14th largest emitter in 2015 to the 25th largest emitter by 2030.

Much of the heavy lifting towards meeting the target has already been achieved. A 26 per cent reduction on 2005 levels meant 5,487 Mt (CO₂-e) was required to be abated between 2021 and 2030. Measures already in place have reduced that target to 696 Mt (CO₂-e).

By carrying over the 367 Mt (CO₂-e) overachieved in the Kyoto Protocol, the amount yet to be abated is 328 Mt (CO₂-e).

The Coalition has demonstrated a path to achieve the outstanding 6 per cent of reductions at the cheapest possible cost. Labor, however, has chosen a more radical path by setting a 45 per cent emissions reduction target far in excess of our international obligation.

Labor has therefore committed to abate 959 Mt (CO₂-e), three times more than the Coalition's target. Should it choose not to carry over its Kyoto balance, the target jumps to 1.3 Mt (CO₂-e).

High Cost or Low Cost?

In its December 2017 report on the energy market, *Power On, Power Off*¹, the Menzies Research Centre foreshadowed the choice between a low-cost and a high-cost path to reducing carbon emissions.

The high-cost path is characterised by:

- Ambitious renewable energy targets that cause electricity prices to rise, reliability to fall, businesses to close and consumers to struggle
- Short-term partisan politics and the satisfaction of sectional interests that increases investor uncertainty

¹ Menzies Research Centre, *Power On, Power Off: Rebooting the national energy market*, MRC, Canberra, December 2017

- A heavy reliance on subsidies to achieve policy ends, eroding productivity, encouraging gaming, disrupting supply and delivering internationally un-competitive energy prices
- A good deal for industry players; a bad deal for consumers.

The low-cost path is characterised by:

- Trust in the principles of physics, engineering and economics to produce the best outcomes
- A technologically neutral policy that resists the temptation to pick winners
- An energy market based on rules that ensure that the long-term interests of consumers are efficiently served
- A good deal for consumers; a competitive market for industry players.

Labor's announcement in November 2018 that it would set a target of a 45 per cent reduction in 2005 carbon emissions by 2030 and set a mandatory renewable energy target (RET) of 50 per cent in 2030 was a declaration that it would use the high-cost path if elected to government.

By contrast, the Coalition's policy decision to reduce the 2005 emissions by 26-28 per cent by 2030, which is in line with Australia's commitment to the Paris agreement and not to renew the RET is a commitment to take the low-cost path.

Crucially, both approaches will comfortably achieve our nationally determined contribution to the 2015 United Nations Paris Agreement. Labor's radical approach will, however, be considerably more expensive. It commits Australia to carry a disproportionately heavier share of the burden in the international task of reducing global carbon emissions.

In addition, Labor has further differentiated its policy from that of the Coalition by announcing a target of 50 per cent renewable energy by 2030. It indicates that a Labor government would rely heavily on the energy sector to meet its emissions reduction target.

The rapid conversion from traditional sources of power to wind, solar and other renewable sources that Labor's target requires cannot occur without considerable costs given the projected technological constraints.

The RET operates by delivering an implicit subsidy to renewable energy providers, which is effectively passed on as a levy to household and business electricity bills.

The transition to renewables also requires investment in backup sources of power, such as batteries, gas generation or hydro. Further investment is needed in transmission networks. These costs are either passed on via the energy provider to the end-user or paid directly from the public purse.

We strongly believe voters should be fully informed about these costs to enable them to make an informed choice at the next federal election.

The Cost of Increasing the Greenhouse Gas Emission Target to 45 per cent

A preliminary report by Dr Brian Fisher of BAE Economics puts scale on the cost of meeting a 45 per cent target. Dr Fisher's modelling forecasts that by 2030 a 45 per cent target will lead to:

- A 0.6 per cent drop in average Gross Domestic Product reducing it from 2.9 per cent to 2.3 per cent
- Cumulative GDP losses (discounted to net present value terms using an assumed social discount rate of 2.6 per cent) of A\$472 billion over the decade to 2030
- A shrinkage of \$144 billion in the overall size of the economy
- A fall in real annual wages is around \$9000 per year by 2030
- A 58 per cent increase in wholesale electricity prices.

An economic adjustment of this size would have serious consequences. It would, for example, increase substantially the risks of recession.

This report focuses on one aspect: the retail price of electricity, a factor key to the success or failure of many businesses and the economic welfare of families.

Scope and Methodology

This report sets out to model the likely cost of electricity at the end of the next decade under two policy scenarios:

- Scenario 1: A low-cost clean-energy path incorporating a greenhouse gas emissions reduction target of 26-28 per cent of 2005 levels by 2030 and the abolition of the RET as envisaged in the Coalition's policy
- Scenario 2: A high-cost clean-energy path incorporating a greenhouse gas emissions reduction target of 45 per cent of 2005 levels by 2030 and a 50 per cent RET as envisaged under the Labor's policy.

Both scenarios assume that greenhouse gas emission savings achieved in excess of our international commitments in phases one and two of the Kyoto Agreement are carried over and set against our Paris commitment.

Underlying data and assumptions about the trajectory of retail electricity prices is drawn from the Australian Energy Market Commission's *2018 Residential Electricity Price Trends*².

Wholesale costs have been adjusted in line with the findings of a study by BAEconomics, which modelled the broad economic effects of the Labor Party and Coalition's proposed energy policy, that is to say a 45 per cent emissions reduction target on 2005 levels by 2030 would be pursued under a Labor government and a 27 per cent reduction target that would be pursued by a Coalition government.³

We also factor in the achievable savings within the National Energy Market under the recommendations of the Australian Competition and Consumer Commission's *Retail Electricity Prices Inquiry* final report⁴ which have since been adopted by the federal government.

It concludes that the size of the emissions reduction target makes a significant difference to the size of the bills households and businesses will have to pay.

Under Labor's policy, the retail price will increase by up to 35 per cent in some markets. Under the Coalition's policy, retail prices will significantly decline by up to 42 per cent.

These figures equate to increases of up to \$144 on a representative household quarterly bill under Labor's high-cost path and up to \$416 on the quarterly bill of a representative small or medium-size business.

The Coalition's low-cost path produces savings of up to \$160 a quarter on a representative household quarterly bill and up to \$537 on the quarterly bill of a representative small or medium sized business.

Consumers in every state will be considerably better off under the Coalition's policy than under Labor. Households will be better off by between \$117 a quarter in WA and \$195 a quarter in Tasmania. Small businesses will be better off by between \$568 a quarter in New South Wales and \$362 in WA.

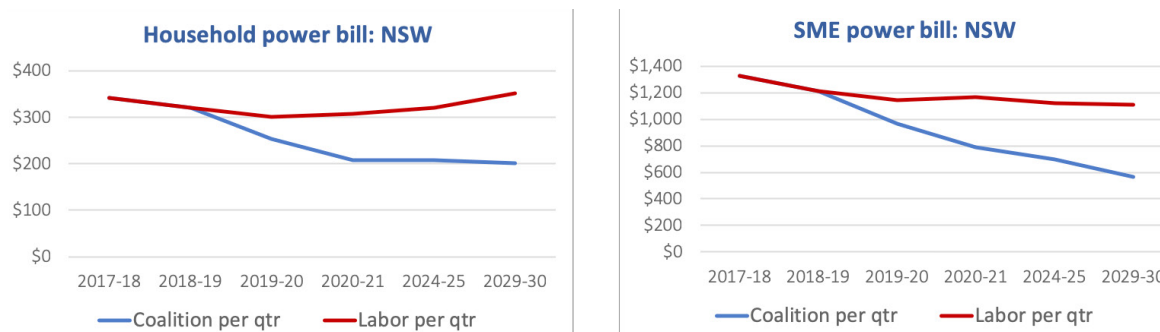
² AEMC, 2018 Residential Electricity Price Trends, Final report, 21 December 2018.

³ Dr Brian Fisher, *Economic consequences of some alternative Australian climate policies*, BAE Economics, Canberra, February 2019. <http://www.baeconomics.com.au/wp-content/uploads/2019/02/Australian-climate-policy-webpage-21Feb19.pdf>

⁴ ACCC, Restoring electricity affordability and Australia's competitive advantage: Retail Electricity Pricing Inquiry – Final Report, June 2018, ACCC, Melbourne.

Regional Analysis

New South Wales



The cost of a unit of electricity in NSW is currently the second highest in the country after South Australia.

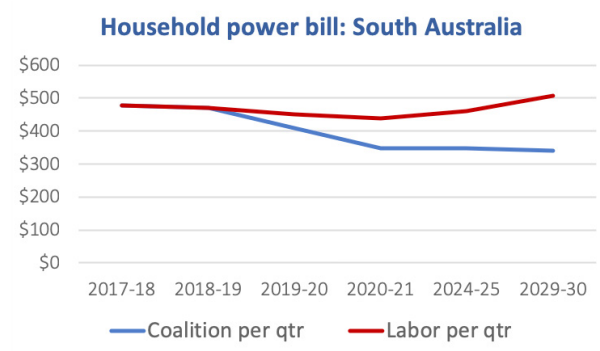
Under the Coalition's policy the price per unit falls by 41 per cent in real terms by 2030, making it the third cheapest in the nation.

Under Labor's policy the price rises marginally by 2 per cent. A representative quarterly household bill rises from \$342 to \$351 under Labor. A quarterly bill for a representative small or medium-size business rises from \$1299 to \$1331.

Under the Coalition, a representative household bill falls from \$342 to \$201. A quarterly bill for a representative small or medium sized business drops significantly from \$1299 to \$762.

A representative household will save almost \$600 a year under the Coalition when compared to Labor's policy. A representative small or medium-size business will save \$2273 a year under the Coalition compared to Labor.

South Australia



The cost of a unit of electricity in South Australia is currently the highest in the country. SA customers pay 60 per cent more per unit than customers in Tasmania.

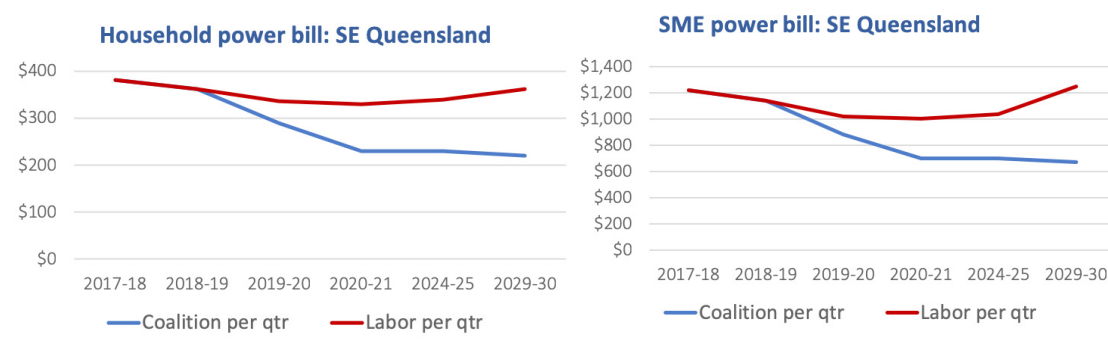
Under the Coalition's policy the price per unit falls by almost a third (29 per cent) in real terms by 2030 and is overtaken by Western Australia in the cost ranking.

Under Labor's policy the unit price rises by 8 per cent and SA electricity per unit remains the highest in the country. A representative quarterly household bill rises from \$477 to \$507 under Labor. A quarterly bill for a representative small or medium sized business rises from \$1526 to \$1621.

Under the Coalition, a representative household bill falls from \$477 to \$340. A quarterly bill for a representative small or medium-size business falls from \$1526 to \$1088.

A representative household will save \$666 a year under the Coalition compared to Labor. A representative small or medium-size business will save \$2132 a year under the Coalition compared to Labor.

South-East Queensland



The cost of a unit of electricity in South-East Queensland is currently the 4th cheapest in the country behind Tasmania, the ACT and the NT.

SE Queensland customers pay 31 per cent less per unit than customers in SA, 10 per cent less than NSW and 6 per cent less than Victoria.

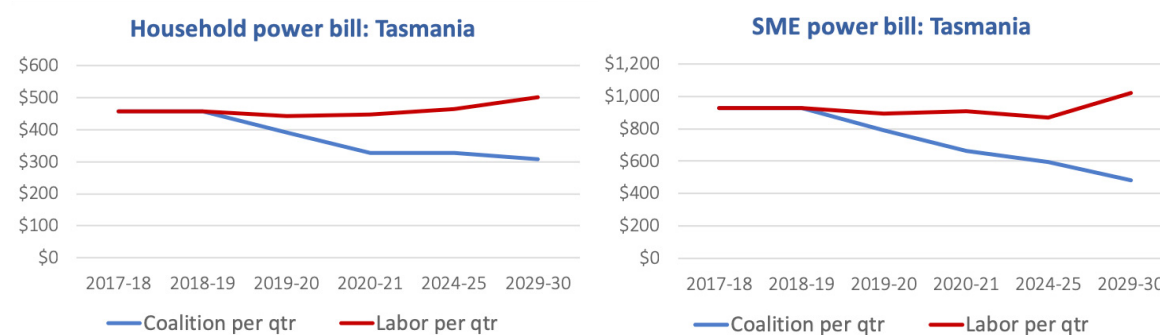
Under the Coalition's policy, the price per unit falls by 41 per cent in real terms by 2030 to become the second cheapest in the country after Tasmania.

Under Labor's policy the unit price falls by a moderate 5 per cent. A representative quarterly household bill falls by \$18 from \$380 to \$362 under Labor. A quarterly bill for a representative small or medium sized business rises slightly from \$1223 to \$1247

Under the Coalition, a representative household bill falls by 42 per cent from \$380 to \$220. A quarterly bill for a representative small or medium-sized business is almost halved from \$1162 to \$672.

A representative household will save \$566 a year under the Coalition compared to Labor. A representative small or medium-size business will save \$1729 a year under the Coalition compared to Labor.

Tasmania



Tasmanians currently pay less than customers in any other state or territory for a unit of electricity. The unit price in Tasmania is currently 65 per cent cheaper than the cost per unit in South Australia, 39 per cent cheaper than NSW and 35 per cent cheaper than Victoria.

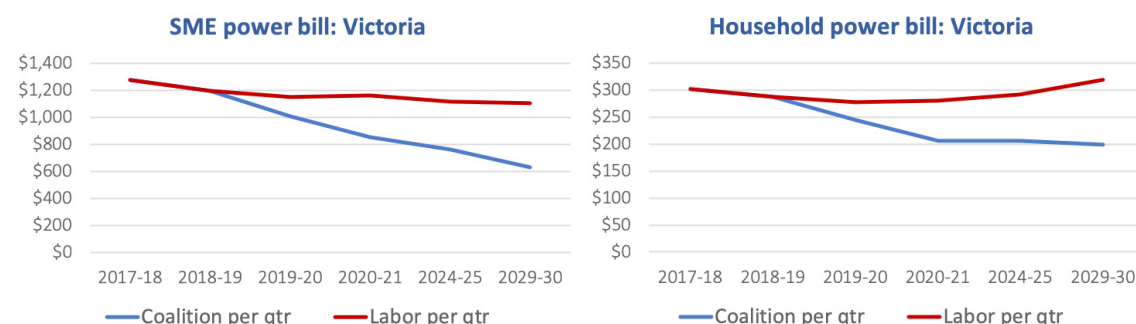
Under the Coalition's policy, the price per unit falls by more than a third (43 per cent) in real terms by 2030.

Under Labor's policy the unit price rises by 9 per cent. A representative quarterly household bill rises from \$458 to \$503 under Labor. A quarterly bill for a representative small or medium sized business rises from \$926 to \$1023 under Labor.

Under the Coalition, a representative household quarterly bill falls from \$458 to \$308. A quarterly bill for a representative small or medium sized business falls by a third from \$926 to \$622.

A representative household will save \$781 a year under the Coalition compared to Labor. A representative small or medium sized business will save \$1581 a year under the Coalition compared to Labor.

Victoria



The cost of a unit of electricity in Victoria is currently the third highest in the country. Victorian customers pay 35 per cent more per unit than customers in Tasmania.

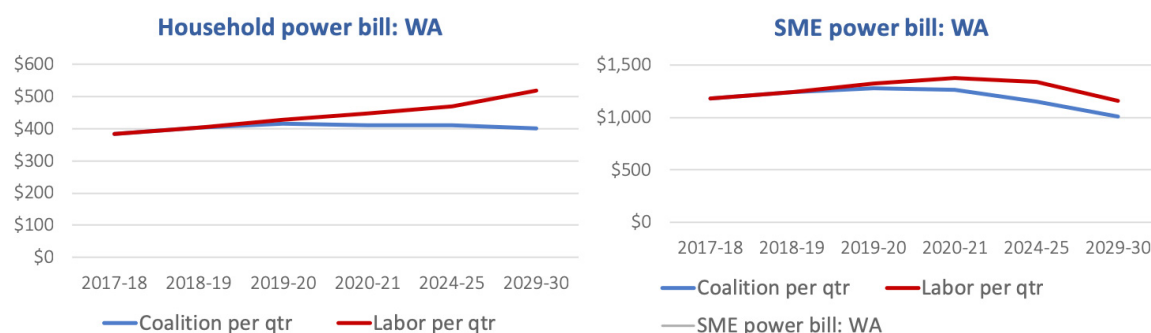
Under the Coalition's policy the price per unit falls by a third (34 per cent) in real terms by 2030 and falls from 3rd to 5th place in the comparative cost ranking.

Under Labor's policy the unit price rises by 6 per cent and Victoria stays third from bottom in the comparative cost rankings. A representative quarterly household bill rises from \$302 to \$319 under Labor. A quarterly bill for a representative small or medium sized business rises from \$1252 to \$1322 as projected efficiencies and lower demand are offset by an increase in the unit price.

Under the Coalition, a representative household bill falls from \$302 to \$199, a saving of \$103 a quarter. A quarterly bill for a representative small or medium-sized business falls by 52 per cent from \$1252 to \$823.

A representative household will save \$482 a year under the Coalition compared to Labor. A representative small or medium sized business will save \$1996 a year under the Coalition compared to Labor.

Western Australia



The price dynamics of retail electricity are different in WA from the eastern states since the WA grid is not part the National Energy Market which connects markets in the east.

Customers in WA have so far escaped the sharp increases in quarterly bills that have hit businesses and households elsewhere, notably in SA, NSW and Victoria.

The unit cost is forecast to rise in WA under both Labor and the Coalition as the WA market catches up with the Eastern States. The magnitude of the rise, however, varies considerably.

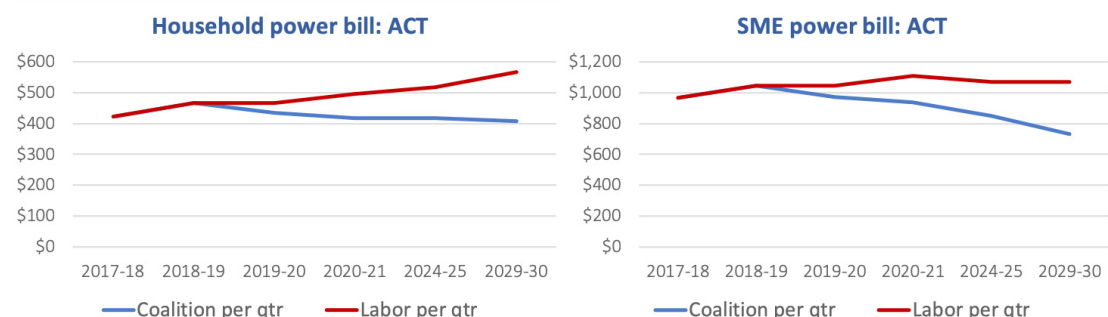
The unit cost will rise by a quarter (26 per cent) in WA compared to a nominal increase of just 4 per cent under the Coalition.

A representative quarterly household bill in WA rises from \$384 to \$519 under Labor. A quarterly bill for a representative small or medium-size business increases from \$1182 to \$1597.

Under the Coalition, a representative household bill rises by \$17 from \$384 to \$401. A quarterly bill for a representative small or medium-size business falls from \$1182 to \$1011.

A representative household will save \$471 a year under the Coalition compared to Labor. A representative small or medium sized business will save \$1449 a year under the Coalition compared to Labor.

Australian Capital Territory



The cost of a unit of electricity in ACT is currently the second lowest in the country, a position maintained because of relatively low transmission costs and heavy subsidies to wind and solar generation.

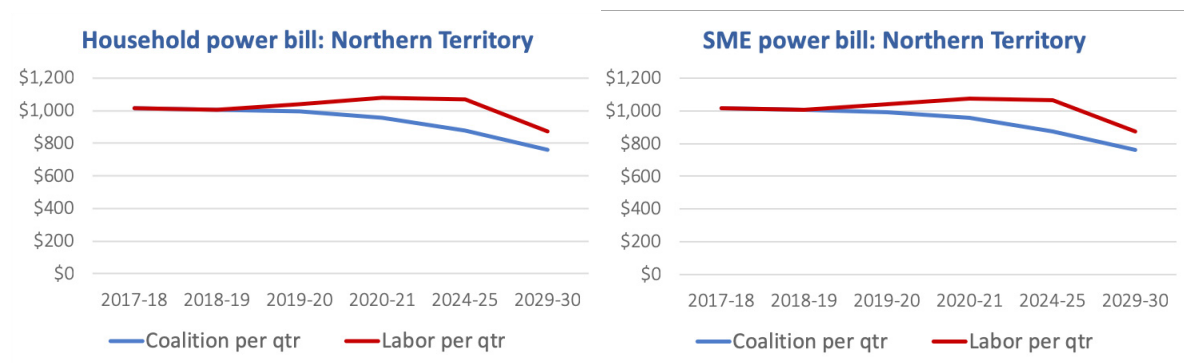
Under Labor's policy the unit price for retail electricity in the ACT rises by a quarter (25 per cent) in real terms by 2030.

A representative quarterly household bill in ACT rises from \$423 to \$568 under Labor. A quarterly bill for a representative small or medium-size business rises from \$947 to \$1270.

Under the Coalition, a representative household bill falls from \$423 to \$407. A quarterly bill for a representative small or medium-size business falls from \$947 to \$909.

A representative household will save \$646 a year under the Coalition compared to Labor. A representative small or medium sized business will save \$1270 a year under the Coalition compared to Labor.

Northern Territory



The cost of a unit of electricity in the NT is currently the 3th cheapest in the country behind Tasmania and the ACT.

A representative quarterly household bill in the NT remains roughly the same in real terms under Labor and the Coalition. A quarterly bill for a representative small or medium-size business also remains static.

Conclusions

Conclusion One: An ambitious emissions reduction target makes electricity significantly more expensive

Labor's claim that retail power prices will be 25 per cent lower under a 45 per cent emissions reduction target than under a 27 per cent emissions reduction target is demonstrably false.

At its most basic level, the assumption of a reduction in retail power prices defies common sense. A radical economic transformation of the economy of this nature inevitably imposes considerable cost. It is also without a firm empirical basis.

The principle of the marginal cost curve, in which the next unit purchased is more expensive than the last, is clearly shown to apply to the renewable energy sector.

BAEconomics' methodology and conclusions, based on rigorous and transparent assumptions, make a convincing case: Labor's policy will add 58 per cent to wholesale prices.

Differences between states on transmission costs and other variables mean that the rise in retail prices is not uniform. Yet we conclude that in every state and territory the effect is the same for both households and representative small and medium businesses.

Conclusion 2: Businesses will feel the pain

Business margins will be squeezed, in some cases to a point to which they cannot survive. In energy-intensive sectors, particularly those in which there is limited discretion around timing of electricity consumption, the burden will be particularly onerous.

There is little scope for quarantining energy intensive trade exposed industries, such as aluminium refining. A fixed target of 45 per cent requires that pain removed from one sector of the economy must be inflicted upon another.

Conclusion 3: Household power bills will rise substantially

A representative household electricity bill will rise by up to \$580 a year in real terms by 2030 depending on the state or territory of residence.

A rise in the price of domestic power places a considerable burden on middle-income families, particularly families with children. It also hurts those on fixed incomes, such as pensioners. Those in regions with the largest weather extremes experience most difficulty.

Increases to domestic power bills are regressive. The burden falls disproportionately upon the poor. The proportion of available income spent on power for those in the upper quintile is typically around 1 - 1.5 per cent. For those in the lowest quintile may be as high as 6 - 7 per cent.

Conclusion 4:

Adding the costs of emissions reductions to electricity bills is economically harmful and lacks transparency or basic fairness. The costs cannot be ignored and are the price a nation must pay for energy transformation.

Governments have an obligation, however, to find the path of least cost, where the burden is not placed unfairly on the shoulders of a few, but is shared according to means and benefit derived.

Appendix

Representative Retail Customer							
		2017-18	2018-19	2019-20	2020-21	2024-25	2029-30
SE QLD	Coalition - real - c/kwh	\$29	\$28	\$22	\$18	\$18	\$17
	Labor - real - c/kwh	\$29	\$28	\$26	\$25	\$26	\$28
	Coalition - real - quarterly (2018\$)	\$380	\$362	\$289	\$229	\$229	\$220
	Labor - real - quarterly bill (2018\$)	\$380	\$362	\$335	\$329	\$339	\$362
NSW	Coalition - real - c/kwh	\$32	\$30	\$24	\$20	\$20	\$19
	Labor - real - c/kwh	\$32	\$30	\$29	\$29	\$30	\$33
	Coalition - real - quarterly (2018\$)	\$342	\$320	\$254	\$208	\$208	\$201
	Labor - real - quarterly bill (2018\$)	\$342	\$320	\$301	\$308	\$321	\$351
ACT	Coalition - real - c/kwh	\$24	\$26	\$24	\$23	\$23	\$23
	Labor - real - c/kwh	\$24	\$26	\$26	\$28	\$29	\$32
	Coalition - real - quarterly (2018\$)	\$423	\$467	\$435	\$418	\$418	\$407
	Labor - real - quarterly bill (2018\$)	\$423	\$467	\$467	\$496	\$519	\$568
VIC	Coalition - real - c/kwh	\$31	\$30	\$25	\$21	\$21	\$21
	Labor - real - c/kwh	\$31	\$30	\$29	\$29	\$30	\$33
	Coalition - real - quarterly (2018\$)	\$302	\$288	\$244	\$206	\$206	\$199
	Labor - real - quarterly bill (2018\$)	\$302	\$288	\$278	\$280	\$292	\$319
SA	Coalition - real - c/kwh	\$38	\$38	\$33	\$28	\$28	\$27
	Labor - real - c/kwh	\$38	\$38	\$36	\$35	\$37	\$41
	Coalition - real - quarterly (2018\$)	\$477	\$470	\$409	\$349	\$349	\$340
	Labor - real - quarterly (2018\$)	\$477	\$470	\$450	\$438	\$460	\$507
TAS	Coalition - real - c/kwh	\$23	\$23	\$20	\$17	\$17	\$16
	Labor - real - c/kwh	\$23	\$23	\$22	\$23	\$24	\$25
	Coalition - real - quarterly (2018\$)	\$458	\$458	\$392	\$328	\$328	\$308
	Labor - real - quarterly (2018\$)	\$458	\$458	\$442	\$449	\$466	\$503
WA	Coalition - real - c/kwh	\$30	\$31	\$32	\$32	\$32	\$31
	Labor - real - c/kwh	\$30	\$31	\$33	\$34	\$36	\$40
	Coalition - real - quarterly (2018\$)	\$384	\$403	\$416	\$410	\$410	\$401
	Labor - real - quarterly (2018\$)	\$384	\$403	\$429	\$448	\$470	\$519
NT	Coalition - real - c/kwh	\$25	\$25	\$25	\$24	\$24	\$23
	Labor - real - c/kwh	\$25	\$25	\$26	\$27	\$29	\$33
	Coalition - real - quarterly (2018\$)	\$419	\$416	\$411	\$396	\$396	\$385
	Labor - real - quarterly (2018\$)	\$419	\$416	\$429	\$445	\$476	\$543



RG Menzies House
Cnr Blackall & Macquarie Streets
Barton ACT 2600

PO Box 6091, Kingston ACT 2604

www.menziesrc.org